

REMARKS

Applicant thanks the Examiner for agreeing to a telephonic interview on August 3, 2007 with the undersigned attorney. Claims 49, 58-62, 73-78, 80, 90, 95, 97 and 98 are pending in this application. No new matter has been added by way of this amendment.

Rejections under 35 U.S.C. §112, ¶ 1

Written Description

Claims 49, 58-62, 73-78, 80, 90, 95, 97 and 98 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Particularly, the Examiner contends that the specification does not support the phrase “wherein said toxin comprises an amino acid sequence that has 97% sequence identity with SEQ ID NO: 2 and wherein said C-terminus of said toxin comprises amino acids 661-788 of SEQ ID NO: 2,” recited in claim 49. The Examiner contends that this phrase, which was added to claim 49 in Applicant’s amendment filed April 30, 2007, constitutes NEW MATTER. The Examiner requires that Applicant either point to support for the phrase or cancel the alleged new matter. Applicant respectfully disagrees that the phrase in question constitutes new matter.

The fundamental inquiry is whether the material added by amendment was inherently contained in the original application (Schering v. Amgen 222 F.3d 1347, 55, USPQ2d 1650 (Fed. Cir. 2000); citations omitted). Koito v. Turn-Key-Tech, 381 F.3d 1142 (Fed. Cir. 2004) held that if amended material is inherently contained in the original application, it cannot constitute new matter. In order to establish inherency, the extrinsic evidence must make clear that the missing descriptive matter (here 97% identity and comprising 661-788 of SEQ ID NO: 2) is necessarily present in the thing described..., and that it would be so recognized by persons of ordinary skill. (In re Smythe, 480 F.2d 1376, 178 (CCPA 1973))

Applicant respectfully submits that the subject matter of the phrase in question is inherently found in Examples 3, 6, 9 and 12 of the specification and in SEQ ID NO: 2, SEQ ID NO: 11 and SEQ ID NO: 32 of the Sequence Listing. The phrase in question also finds direct support in original claims 54 and 57.

Example 3 (page 47 of the specification) describes isolating two (2) Vip3C homologs, Vip3C(a) and Vip3C(b) from two (2) different Bt strains, C536 and C1674. The two homologs differ only at position 738, wherein Vip3C(a) has Glu (E) and Vip3C(b) has Gly (G). The sequence of both homologs is shown as SEQ ID NO: 2 in the sequence listing, wherein the amino acid at position 738 is designated with an "X." "X" is described in the heading of SEQ ID NO: 2 as being either "E" or "G." Example 6 (page 50 of the specification) shows that both Vip3C(a) and Vip3C(b) are active against ECB.

Example 9 (pages 53 & 54 of the specification) describes a Vip3 toxin that is made by taking the C-terminus of Vip3C(b) (amino acids 661-788 of SEQ ID NO: 2) and fusing that C-terminus to an N-terminal sequence of Vip3A(a), which is a toxin with no activity against ECB. The resulting human-made toxin is shown to now have activity against ECB indicating that the C-terminal amino acids of SEQ ID NO: 2 are sufficient to confer ECB activity. The sequence of this toxin is disclosed as SEQ ID NO: 11. SEQ ID NO: 11 has 97% identity to SEQ ID NO: 2 and comprises amino acids 661-788 of SEQ ID NO: 2. SEQ ID NO: 11 has a Gly (G) at position 738 because it was constructed using Vip3C(b).

Example 12 (pages 57 & 58 of the specification) describes the isolation of another Vip3C homolog, Vip3C-12168, using a cosmid library approach. The sequence of this toxin is disclosed as SEQ ID NO: 32. SEQ ID NO: 32 has 99% identity to SEQ ID NO: 2 and comprises amino acids 661-788 of SEQ ID NO: 2. SEQ ID NO: 32 has a Glu (E) at position 738, which is the same as in Vip3C(b).

Therefore, Applicants respectfully submit that the specification describes four (4) Vip3 toxins that have at least 97% identity to SEQ ID NO: 2 and comprise amino acids 661-788 at the C-terminus.

Applicant further notes that original claims 54 and 57 explicitly state the limitation of "at least 97% identity and comprising amino acids 661-788 of SEQ ID NO: 2." Claim 54 as filed depends from original claim 49 and adds the limitation that the isolated toxin comprises amino acids 661-788 of SEQ ID NO: 2. Claim 57 as filed depends from original claim 49 and adds the limitation that the isolated toxin comprises an amino acid sequence that has at least 97% identity to SEQ ID NO: 2. Claim 80 as filed depends from original claim 49 and adds the limitation that the isolated toxin is active against ECB. Thus, the amendment made to claim 49

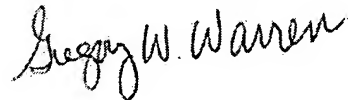
in Applicant's response filed April 30, 2007 merely incorporated the subject matter of claims 54, 57 and 80.

Applicant respectfully submits that the inherent properties of the toxins disclosed in the specification as well as the explicit language of the claims as filed provide support that the phrase "wherein said toxin comprises an amino acid sequence that has at least 97% sequence identity with SEQ ID NO: 2 and wherein the C-terminus of said toxin comprises amino acids 661-788 of SEQ ID NO: 2" does not constitute new matter. Therefore, Applicant respectfully requests that the rejection of claims 49, 58-62, 73-78, 80, 90, 95, 97 and 98 under 35 U.S.C. § 112, first paragraph be withdrawn.

CONCLUSION

In view of the above remarks, Applicant respectfully submits that this application is now ready for allowance. Early notice to this effect is solicited. If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned agent.

Respectfully submitted,

A handwritten signature in cursive script that reads "Gregory W. Warren".

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